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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,117	09/07/2005	Hubert de Villiers Barnard	SF-111	5594
43419 7590 04/10/2008 PAULEY PETERSEN & ERICKSON 2800 WEST HIGGINS ROAD SUITE 365 HOFFMAN ESTATES, IL 60195				
EXAMINER				
HARP, WILLIAM RAY				
ART UNIT		PAPER NUMBER		
4174				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary****Application No.**

10/525,117

**Applicant(s)**

BARNARD, HUBERT DE VILLIERS

**Examiner**

William R. Harp

**Art Unit**

4174

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on 18 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 1-13 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 31-33 is/are allowed.
- 6) ☒ Claim(s) 14-19, 24 and 27 is/are rejected.
- 7) ☒ Claim(s) 20-23, 25, 26 and 28-30 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 February 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 9/7/05
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "Fig. 3, 16.2" and "Fig. 4, 62.2" have both been used to designate a tubular frame member [page 4, line 11]. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

2. Claim 28 is objected to because of the following informalities: there appears to be text missing from the claim, specifically page 5, line 28, "...inoperative position clear of the...". The claim language is identical to claim 20 and the examiner interprets the claim to be written in claim 20 "...inoperative position clear of the bottom run of the conveyor belt and an operative position in which it traps the bottom run of the conveyor belt against a fixed frame member...". Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 14-19, 24 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nieuwoudt (WO 01/055013) in view of Mott et al. (USP 6152290).
5. Re claims 14 and 27, Nieuwoudt teaches a conveyor belt arrestor comprising: a frame (supports 20) mountable to a fixed structure of a conveyor belt installation, the frame including a reaction member (rod 24) located operatively above a top run of a conveyor belt of the installation; a wedging structure (clamping member 14) located operatively beneath the top run of the conveyor belt and mounted for swinging movement in a vertical plane relative to the frame (mounted to supports 20 through arms 26 attached at pivot point 18). The examiner interprets wedge to mean “to fasten firmly”, which can be performed by the clamping member of Nieuwoudt. Nieuwoudt teaches a trapping apparatus for trapping a bottom run of the conveyor belt. Retaining device 112 is used to trap the bottom run of the conveyor belt in Nieuwoudt. Nieuwoudt does not teach a torsion spring to apply a rotational bias to the wedging structure in a direction to swing the wedging structure upwardly. Mott et al. teaches at least one torsion spring (84) used to apply a rotational bias to a scraper blade assembly (20) [Figure 1, col 3, lines 12-15, 24-26, and 39-40 ]. It is well known in the conveyor art that a torsion spring can be used to replace a counterweight for applying a rotational bias to a belt scraper. Therefore, one of ordinary skill in the conveyor art would have found it obvious to replace the counterweights of

Nieuwoudt with the torsion springs of Mott et al. for the purpose of swinging the wedging structure upwardly to lift the top run of the conveyor belt toward the reaction member such that the top run of the conveyor belt is trapped between the wedging structure and the reaction member.

6. Re claim 15, Nieuwoudt teaches the clamping member 14 comprises arms 26 rotatably attached to pivot points 18 on the central legs 30 of supports 20, but fails to teach a single arm carried by a shaft. Mott et al. teaches that the scraper blade assembly is attached by arms 70 to the tensioners 80 about pivot points [col 3, lines 27-29] and that this arrangement can be replaced by a single shaft 210 that is rotationally biased by the torsion springs 84 [col 9, lines 1-4]. Therefore, it would have been obvious to one of ordinary skill to replace the pivot points of Nieuwoudt with a single shaft as taught by Mott et al. and also to substitute the two arms with a single arm because the arms provide structure for the clamping member to be attached. Substituting two arms for a single arm would have produced a predictable result.

7. Re claim 16, Nieuwoudt fails to teach torsion springs acting on opposite ends of the shaft. Mott et al. teaches torsion springs acting on opposite sides of the conveyor belt [col 3, lines 24-26]. Mott et al. also teaches using a single shaft rather than pivot points with the torsion springs acting on both ends of the shaft. Therefore, if the pivoting structure of Nieuwoudt could be replaced by the pivoting structure of Mott et al., it would be obvious that the single shaft structure with torsion springs acting on each end could have been used to rotate the clamping structure of Nieuwoudt.

8. Re claim 17, Nieuwoudt fails to teach the wedging structure comprises a plurality of wedge-shaped segments. The clamping member of Nieuwoudt and the wedging structure of the

applicant are used for the same purpose: to hold the belt in place in the event of the belt breaking. Changing the shape of one for the other would have achieved the same result of holding the belt firmly in place, therefore it would have been obvious to one of ordinary skill that changing the structure of the clamping member would have had a predictable result.

9. Re claim 18, Nieuwoudt teaches a reaction member (rod 24) extending transversely over the conveyor belt between side structures of the frame. Substituting a beam for a rod would have produced a predictable result and would have been obvious to one of ordinary skill.

10. Re claim 19, Nieuwoudt teaches a trapping apparatus for trapping a bottom run of the conveyor belt in the event of belt breakage. Nieuwoudt teaches that the retaining device 112 can be used to trap the bottom run of the conveyor belt.

11. Re claim 24, Nieuwoudt fails to teach an auxiliary apparatus which acts in addition to the at least one torsion spring to swing the wedging structure upwardly in event of belt breakage and loss of belt tension. Mott et al. teaches at least one torsion spring, therefore, the second torsion spring could be considered to be an auxiliary apparatus to one of ordinary skill. The second torsion spring acts in addition to the at least one torsion spring to swing the wedging structure upwardly in event of belt breakage and loss of belt tension.

***Allowable Subject Matter***

12. Claims 20-23, 25, 26, and 28-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. The following is a statement of reasons for the indication of allowable subject matter:

14. Re claims 20-23, the prior art of record fails to teach a trapping apparatus comprising a detent arranged to hold the trapping member in the inoperative position. It also fails to teach that the trapping apparatus is adjustable to cater for different belt thicknesses, and that the trapping apparatus rotates in eccentric openings.

15. Re claims 25 and 26, the prior art of record fails to teach the auxiliary apparatus comprising a roller supported rotatably by the frame and arranged to be rotated by the top run of the conveyor belt; a sub-shaft on an axis of the roller which can rotate relative to the roller during normal belt operation but which is locked relative to the roller in the event of reverse movement of the conveyor belt and corresponding reverse rotation of the roller; and a cord attached to the sub-shaft and to a point on the frame above the top run of the conveyor belt which is arranged to be wound up on the sub-shaft and thereby to raise the roller and with it the top run of the conveyor belt in the event of reverse rotation of the roller, further comprising a unidirectional bearing supporting the sub-shaft relative to the roller.

16. Re claims 28-30, the prior art of record fails to teach a detent arranged to hold the trapping member in the inoperative position during normal conveyor belt operation and, in response to upward swinging movement of the wedging structure, to release the trapping member to swing downwardly under gravity to the operative position, the trapping member is carried by an arm on a rotatable shaft, the effective distance between the shaft and the fixed frame member is adjustable to cater for different thicknesses of conveyor belt, the rotatable shaft to which the arm carrying the trapping member is connected has ends which are rotatable in eccentric openings in members which are themselves rotatable relative to the frame to adjust the effective length of the arm.

17. Claims 31-33 are allowed.
18. The following is an examiner's statement of reasons for allowance:
19. Re claims 31-33, the prior art of records fails to teach a conveyor belt arrestor comprising, in conjunction with other limitations, a detent trapping member located operatively above the bottom run of the conveyor belt and a detent arranged to hold the trapping member in an inoperative position during normal belt operation.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William R. Harp whose telephone number is (571) 270-5386. The examiner can normally be reached on Monday - Friday, 8:30 AM - 5:00 PM EST, Alt. Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly D. Nguyen can be reached on (571) 272-2402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/W. R. H./  
Examiner, Art Unit 4174

/Kimberly D Nguyen/  
Supervisory Patent Examiner, Art Unit 4174